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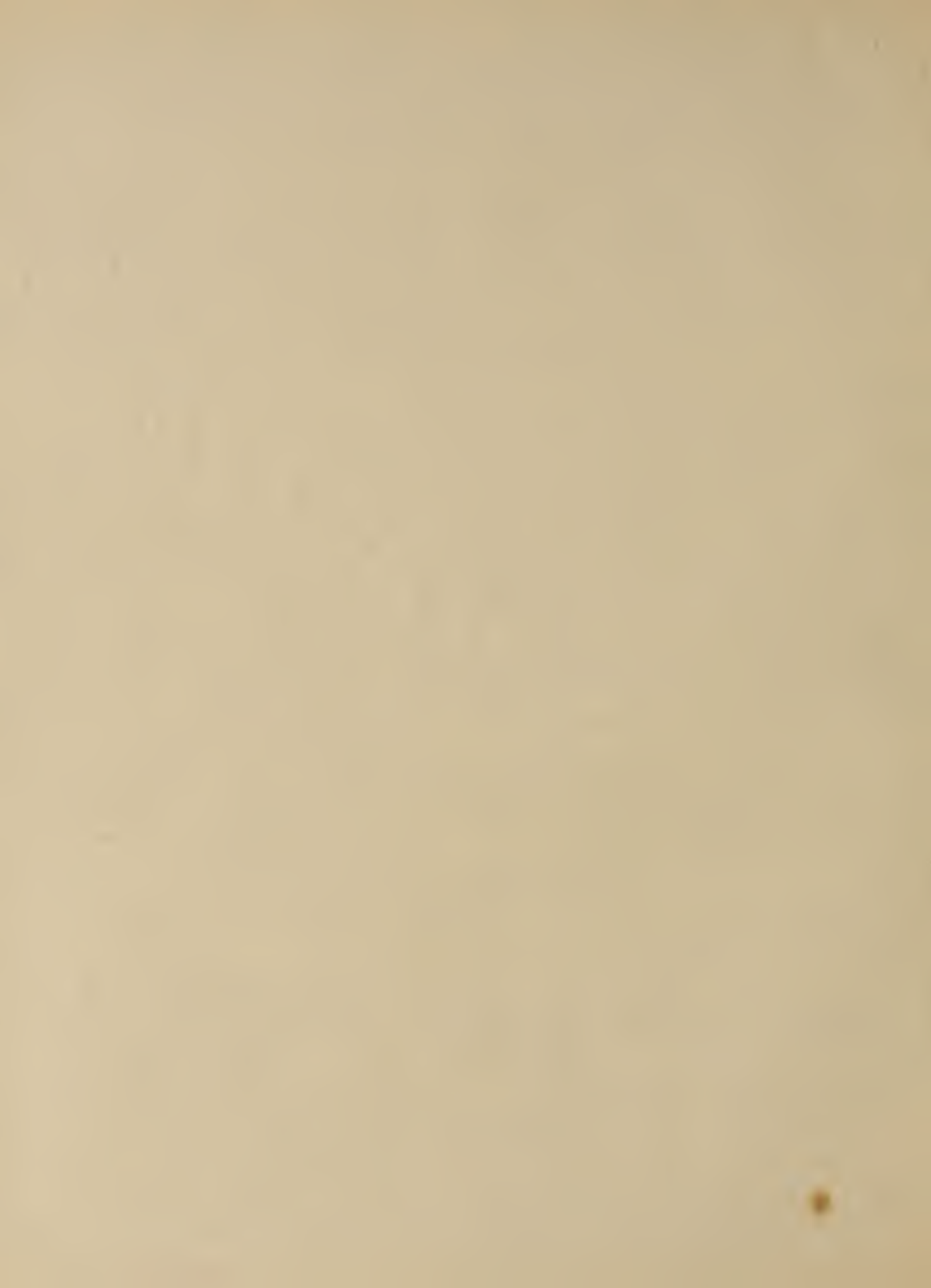
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INSECT PEST SURVEY BULLETIN

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THE MORE IMPORTANT RECORDS FOR OCTOBER 1936

During the late fall egg laying of grasshoppers in Indiana and Illinois was so extensive that these States anticipate more severe injury than they have had in recent years. The same condition prevails in eastern Iowa.

Chinch bugs are generally abundant from Indiana westward to Kansas and Nebraska. The number of bugs entering hibernation indicates a large population next spring.

The corn ear worm developed so rapidly during the late fall that in October considerable damage was done from the Middle Atlantic States westward to the Mississippi River. Appreciable crop losses were also recorded from Oklahoma and Utah.

In the East Central States heavy populations of the codling moth are reported, making possible a heavy carry-over of this insect next spring. This insect was more prevalent on pears in Lake County, Calif., than ever before recorded.

Florida red scale infestations are heavier in Florida than at any time since 1934.

Late flights of the cotton leaf worm were reported from the East Central States northeastward to Maine and into Ontario, Canada.

A recent survey indicates that the smaller European elm bark beetle is now well established in an area approximately 100 miles in diameter in West Virginia and eastern Ohio.

The hemlock spanworm is rapidly increasing in Mount Desert Island, Maine, where it is attacking fir and spruce.

The eastern spruce beetle has destroyed the spruce over an area of between 800 and 900 acres in the Green Mountain National Forest, in Vermont.

The small bagworm, Psyche nigrita B. & McD., has been found infesting the recent plantings of tung-oil trees in Florida.

Reports of sporadic occurrence of screwworm infestations were received during October.

NOTICE TO COLLABORATORS

Robert Glen, of the Canadian Entomological Branch, is spending several months at the National Museum, engaged in a study of elaterid larvae, particularly those belonging to the genus Ludius and allied groups. He would be pleased to received on loan, for use in this study, any material which has been definitely associated with adults of these groups.

THE MORE IMPORTANT FEATURES IN CANADA IN SEPTEMBER AND OCTOBER 1936

With the advent of autumn, the adult grasshopper populations in the Western Provinces declined rapidly and the outbreak terminated for this season. Egg surveys of the infested regions have proceeded, and indications point to continued severe outbreaks in many areas in 1937. In southwestern Manitoba, where, this year, the infestation of the lesser migratory grasshopper was more severe than was expected and where considerable damage was done, the 1937 outbreak threatens to be more severe than any during the last 5 years. A few small, lighter outbreaks will likely occur in central and eastern Manitoba. In Saskatchewan grasshoppers materially reduced the yields of feed grains and fodder throughout the infested region, and a very general and often considerable increase in the numbers of adult insects was noted as compared with the autumn of 1935. Furthermore, a marked spread into new localities was found to have occurred, with an increase of intensity in the drought-affected northwest. The outlook for 1937, in Saskatchewan, is considered rather unfavorable, as the outbreak will probably be considerably more severe generally in the prairie areas, and will extend farther into the northwest section. It appears that the roadside grasshopper will predominate in nearly all the more important outbreaks in this province in 1937. In Alberta grasshoppers caused damage to late grains and forage crops. Dry weather during the year was favorable to increase in many sections, and threatening outbreaks of the roadside and lesser migratory species are anticipated in 1937 in a number of areas, together with a northward extension of the affected region. In the Dry Belt area of British Columbia, where grasshoppers increased enormously during 1936, the outbreak prospects for 1937 indicate the need of a widespread control campaign to avert heavy losses.

An increased outbreak of the pale western cutworm is expected in 1937 in Saskatchewan and Alberta, where this species caused extensive losses to crops during the past season. The moth flight was about over by mid-September.

Wireworms caused serious and widespread damage to the potato crop over a wide area in Saskatchewan. Onions and gladioli also suffered attack. It is evident that conditions, at least in central and western parts of the Province, have been conducive to severe attack on various vegetable and flower garden plants by these insects.

Throughout much of the prairie area of Saskatchewan losses to wheat from attacks of the wheat stem sawfly were severe in fields where harvesting was delayed. Heavy losses occurred locally in Alberta.

Say's stink bug has been recorded from a number of points in Alberta and Saskatchewan, but has not yet caused economic damage.

Potato flea beetles were reported to be abundant in parts of Nova Scotia, Quebec, and Ontario, where they caused local injury. Potato aphids were scarce in eastern Ontario. Light-to-severe damage by the potato psyllid (Paratrioza cockerelli Sulc.) occurred in limited areas in Alberta and light infestations were found in several localities in Saskatchewan.

As usual, the imported cabbage worm effected material damage to cruciferous crops during the summer and autumn, throughout the Dominion.

The European corn borer was more prevalent in Ontario and Quebec than for a number of years. In Essex County, in southwestern Ontario, crop damage was reported greater than in any year since 1927. The infestation in eastern Ontario was also higher than it had been in the past.

The southern cowpea weevil was found at Trail, British Columbia, in a small shipment of cowpeas from Texas.

The gladiolus thrips has been found in a number of new localities in British Columbia, and appears to be spreading over the province.

Weather conditions in southern Ontario were favorable to the codling moth. Sideworm injury to apples was prevalent. In the Okanagan Valley, British Columbia, the lesser apple worm caused much damage to fruit.

Small numbers of larvae of the European spruce sawfly have been taken in Cumberland, Pictou, Antigonish, and Guysboro Counties, in Nova Scotia, but none were found on Prince Edward Island.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

- Indiana. J. J. Davis (October 16): The population was greater in 1936 than for a number of years and there is reason to anticipate further increase in 1937. In August reports were received of injury to tomato fruits and all kinds of garden plants, as well as to new alfalfa and corn. Reports and observations in September indicate an abundance of immature grasshoppers, which are likely to be destructive to wheat this fall.
- Illinois. W. P. Flint (October 19): A few preliminary examinations for eggs show them to be very numerous, probably at least three times as abundant as in the fall of 1935.
- Wisconsin. E. L. Chambers (October 23): Following heavy rains about the last week of August, adults of all species became very scarce everywhere. The egg survey revealed few eggs laid in most of the areas where heavy damage occurred last summer.
- Tennessee. E. A. Back (October 13): The lesser migratory locust (Melanoplus mexicanus Sauss.) was received today from Bristol, where it was said to be invading a furniture store and eating holes in the furniture covers.
- Iowa. C. J. Drake (October 21): The adult grasshopper survey was completed a few weeks ago and an egg survey is now being made. The outlook for next year is very serious.
- Missouri. L. Haseman (October 21): During the month egg laying has been in progress but the weather has been unfavorable for it and our state-wide survey indicates that over most of the State egg laying has been considerably below normal. M. bivittatus Say and M. differentialis Thos. are now practically all gone, but M. femur-rubrum and M. mexicanus continue to be present in limited numbers and the females are still carrying eggs.
- North Dakota. F. Gray Butcher (October 27): Observations on grasshopper eggs indicate a somewhat lighter infestation over the State in general; however, the western part of the State and some southern counties have menacing egg populations. M. mexicanus is the predominant species and M. femur-rubrum, M. packardii Scudd, M. bivittatus, and Camnula pellucida Scudd. are represented by smaller numbers.
- Kansas. H. R. Bryson (October 5): Notwithstanding the increased population of grasshoppers during the past summer, very few reports of injury to fall-sown wheat have been received.
- Nebraska. M. H. Swenk (October 15): Grasshoppers were troublesome about young alfalfa and early wheat fields from September 30 to October 15, but especially so up to September 30.
- Oklahoma. C. F. Stiles (October 21): The long winged grasshopper (Dissosteira

longipennis Thos.) is seriously damaging the early sown wheat just coming up in Texas and Comanche Counties. Approximately 180 tons of poison bait has been distributed this month in these two counties with fair results, as the hoppers continue to come in from the dry pastures and the young wheat is the most attractive food at this time. There has been practically no damage from other species so numerous early in the season.

F. A. Fenton (October 22): The differential grasshopper (M. differentialis) is now laying eggs. This species still continues to be active in Payne, Pawnee, and neighboring counties. Some damage is being done to young wheat. In the southwestern part of the State surveys indicate comparatively little egg deposition.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

Virginia. H. G. Walker (October 26): The fall armyworm has continued to be destructive to spinach and rye at Norfolk.

South Carolina. C. F. Rainwater (September): Numerous complaints were received at the Pee Dee Experiment Station at Florence of damage to soybeans by L. frugiperda and Anticarsia gemmatilis Hon. The fall armyworm is the more abundant. This is the third successive year these complaints have been received.

Ohio. T. H. Parks (October 24): Considerable damage was being done late in October by larvae feeding on sweet corn in the University gardens at Columbus.

J. S. Houser (September 30): Several damaged stalks of late corn sent in from New Philadelphia. Numerous larvae, ranging in length from $\frac{1}{2}$ inch to $1\frac{1}{4}$ inches, were present.

Missouri. L. Haseman (October 21): Although in central Missouri I have seen very little of this pest on alfalfa and other crops, we have had several complaints from the southern part of the State.

Mississippi. C. Lyle (October 24): Serious injury to gladioli by the fall armyworm was reported on September 25 from Jackson.

CLOUDLESS SULPHUR (Catopsilia eubule L.)

Florida. G. B. Merrill (October 23): During the week beginning Labor Day there was a considerable southward flight of cloudless sulphur on Lake Santa Fe, near Waldo.

GULF COAST FRITILLARY (Dione vanillae L.)

Florida. G. B. Merrill (October 23): There was a considerable flight of the Gulf Fritillary on Lake Santa Fe, near Waldo, during the week beginning Labor Day.

WHITE GRUBS (Phyllophaga spp.)

Kansas. H. R. Bryson (October 24): One field of wheat at Manhattan was injured considerably by white grubs. The grubs were active also in strawberry beds in northeastern Kansas. A report from Hazelton indicated that P. lanceolata Say had cut off wheat plants.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (October 24): The present hessian fly situation is quite satisfactory.

Indiana. C. M. Packard (October 20): Fall infestation of sown wheat now appears to be very light in northern Indiana. Light-to-moderate infestation present in volunteer, where small-to-mature larvae and many puparia are now present. There was a light emergence of adults from volunteer early in October.

Missouri. L. Haseman (October 21): Summer flaxseeds on recent check-ups throughout southeastern, northeastern, northwestern, and central Missouri indicate considerable parasitization and mortality, probably due to excessive summer heat. Rain and cool weather late in September and throughout October have given the Hessian fly a further setback. Present indications are that we will have less fly on the next crop of wheat than we have had for several years past.

Kansas. H. R. Bryson (October 24): Hessian fly is present in the vicinities of Abilene and Junction City, and in southeastern Kansas.

CHINCH BUG (Blissus leucopterus Say)

Indiana. J. J. Davis (October 16): The second generation of chinch bugs increased to threatening numbers and in some localities caused noticeable damage to corn. The hibernating bugs are sufficiently numerous to offer a threat for next spring.

C. Benton (October 20): In the vicinity of Lafayette most of the bugs have become adult. Scattered field observations indicate that the bugs are moderately abundant in northwestern Indiana, but scarce in the northeastern part of the State.

Illinois. W. P. Flint (October 19): Chinch bugs have reached maturity in sections of the State except the northern part and are already in winter quarters over most of the area. Judging by preliminary examinations, the bugs are about as abundant in southern Illinois as they were in the fall of 1933.

Iowa. C. J. Drake (October 21): Chinch bugs are very abundant in the southern part of the State.

Missouri. L. Haseman (October 21): Recent surveys indicate the lowest fall population for several years.

Kansas. H. R. Bryson (October 24): Chinch bugs are numerous at Manhattan, where two or three flights have occurred since October 1, but the situation is not alarming.

Nebraska. M. H. Swenk (October 15): Chinch bugs were numerous in Nemaha County cornfields at least up to September 21, the date of the last inquiry.

CORN

CORN EAR WORM (Heliothis obsoleta F.)

South Carolina. F. Sherman and associates (October): Noticeable riddling of tops in late corn by corn ear worm, yet not as bad as might have been expected with the crop so late.

Indiana. E. V. Walter (October 20): All stages of corn ear worm now present at Lafayette. They are mainly in late corn, which averages 80 percent or more of the ears infested. Limited field observations indicate progressively lighter infestations toward the northeastern part of the State. Counts in late-maturing fields near Auburn and Fort Wayne showed about 30 to 35 percent of the ears infested.

Illinois. W. P. Flint (October 19): A severe infestation extended over the southern third of the State, the worms causing considerable damage by eating beans out of the soybean pods, destroying new seedings of alfalfa, and feeding on old alfalfa seedings. There was a heavy flight of adults in the central part of Illinois on warm evenings early in October.

Kentucky. W. A. Price (October 24): Corn ear worms ruined much of the late corn. Many fields where the plants came into tassel late in September and early in October were completely ruined.

Iowa. C. J. Drake (October 21): The corn ear worm has been unusually abundant this fall. In some fields it is almost impossible to find uninfested ears. The infestation is general over the State.

Missouri. L. Haseman (October 21): With practically no acreage of corn escaping the summer drought and with very little late sweet corn, the corn ear worm has again attracted attention on alfalfa, similar to the injury in 1934. Again the green variety of larva has been especially prominent.

Oklahoma. F. A. Fenton (October 22): No late corn was planted this year and the corn ear worm is scarce, an occasional larva being found in sorghum buds. On cotton, however, this species appears to be moderately abundant,

most of the larvae being about one-third grown.

Utah. G. F. Knowlton (September 29): Corn ear worm has been reported doing injury in Beaver, Juab, Millard, Washington, Uintah, Sevier, Iron, Wasatch, and Salt Lake Counties.

SOUTHWESTERN CORN BORER (Diatraea grandiosella Dyar)

Texas. F. L. Thomas (October 14): Specimens of D. grandiosella sent in on August 6 from corn raised near Tahoka, Lynn County. This is the first record from that county.

SOYBEANS

VELVETBEAN CATERPILLAR (Anticarsia gommatalis Hbn.)

Mississippi. C. Lyle (October 24): The velvetbean caterpillar had stripped nearly all of the soybeans in the vicinity of State College by October 15. Inspector J. P. Kislanko reports that the insect was causing heavy defoliation of soybeans in Perry and Jones Counties on October 17.

Georgia. T. L. Bissell (November 2): Very numerous on alfalfa at Experiment.

CROTALARIA

BELLA MOTH (Utetheisa bella L.)

Alabama. J. M. Robinson (October 28): This insect is generally distributed over the State and is causing concern, since the newly introduced legume, crotalaria, has proved a most suitable food plant. At the substation on Sand Mountain larvae defoliated a whole planting of the legume. Larvae feed on maypop (Passiflora incarnata) early in the season and later attack the foliage of crotalaria.

F R U I T I N S E C T S

FLAT-HEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Maryland. E. N. Cory (October 2): Cherries at Westminster have been attacked by the flat-headed apple tree borer.

Chic. E. W. Mendenhall (October 14): The flat-headed borer is injuring mountain ash trees in a nursery near Newark.

Nebraska. M. H. Swenk (October 15): Reports of damage to plum, apple, and cherry and to elm and other shade trees were received from Lancaster, Saline, Platte, Thayer, Antelope, Hall, and Harlan Counties from September 20 to October 15.

Oklahoma. F. A. Fenton (October 22): We have received requests concerning damage by the flat-headed apple tree borer.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

- West Virginia. F. W. Craig (September 29): San Jose scale is attacking lilac branches at Fairmont.
- Georgia. O. I. Snapp (October 17): Infestation on peach trees at Fort Valley built up rapidly last month and its extent is now about that of an average year.
- Ohio. E. W. Mendenhall (October 22): San Jose scale is found in some commercial apple orchards in Licking County. In some localities it spread during the summer.
- Illinois. W. P. Flint (October 19): In the central part of Illinois nearly all the San Jose scale was killed by the severe winter, but a light infestation is developing mainly on the trunks of the trees, very little extending to the tops and outer branches.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

- Georgia. C. H. Alden (October 17): The last moth emerged September 29 at Cornelia. No egg laying or fresh stings noted in the past 2 weeks. All larvae leaving apples and spinning up winter cases.
- Ohio. T. H. Parks (October 24): There will be a heavy carry-over of larvae in the two seriously affected areas, Lawrence County in the south, and Lucas and Ottawa Counties in the north. Eighty orchards visited by extension agents showed an average of 89.5 percent clean fruit and 5.6 percent blemished by codling moth.
- Indiana. J. J. Davis (October 16): Infestation heavy in southern Indiana and in some orchards in the northeastern section.
- North Dakota. J. A. Munro (October 27): Light infestation of larvae in crabapples observed at Fargo.
- Missouri. L. Haseman (October 21): Where a regular schedule of sprays was applied we will have the lightest carry-over of worms that has occurred in Missouri for the last 5 or 6 years. However, in orchards where but few applications were made worms are abundant in the bands.
- California. S. Lockwood (October 7): Codling moth was responsible for greater loss this year than ever before in the big valley district in Lake County. Inspections of pear trees indicate that there is apt to be a very heavy winter carry-over of hibernating larvae.

RED-HUMPED CATERPILLAR (Schizura concinna S. & A.)

- Maine. H. B. Peirson (October): Reported stripping foliage of apple at Greenville on September 8.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Ohio. T. H. Parks (October 24): On October 12 we received a report of serious injury from shot-hole borers to a 12-year-old apple orchard at Hamilton, in Butler County. This county was in the heart of the drought area and borer damage has evidently followed in the wake of the drought.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Connecticut. P. Garman (October 23): More abundant than last year but about average, as compared with the usual infestation. Infested apple fruit has recently been received from Elmwood, Meriden, and New Haven.

PEACH

PEACH BORER (Conopia exitiosa Say)

Georgia. O. I. Snapp (October 17): Emergence of moths at Fort Valley was practically completed by September 25, earlier than usual. More paradichlorobenzene is being used this fall than for a number of years, which is attributed largely to the good profit made by Georgia growers out of the crop this year. Many growers resort to worming the trees during years when profits are low.

C. H. Alden (October 17): Growers have finished applying paradichlorobenzene in the northern section of the State. Some of them did not use the chemical because of the lightness of the infestation.

Ohio. E. W. Mendenhall (October 2): The peach borer was found to be serious in peach-tree stock in a nursery at Frazeyburg.

Nebraska. M. H. Swenk (October 15): From Lancaster County on September 25 came a report of peach trees being attacked.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Ohio. T. H. Parks (October 24): Larvae were common in apples being harvest in small orchards in the eastern part of Lucas County the middle of October. About 25 percent of the larvae found within the apples was oriental fruit moth, the remainder being codling moth. Nearly all of the larvae found in pears were oriental fruit moth. Oriental moth larvae were also common in apples in one Delaware County orchard, where peach trees were interplanted.

Mississippi. C. Lyle (October 24): Complaints and specimens of peach trees injured by this pest were received from Steens and New Albany on October 8.

GRAPE

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

California. S. Lockwood (October 7): The grape leaf folder has been especially abundant in the vineyards near Exeter, Tulare County, and Parlier, Fresno County. Some damage has been done.

PECAN

TWIG GIRDLER (Oncideres cingulatus Say)

Georgia. C. H. Alden (October 17): Many complaints of injury by the hickory twig girdler to pecan twigs at Cornelia have been received.

Florida. J. R. Watson (October 22): The hickory twig girdler did its usual damage to hickory, pecan, and "Australian pine", and some damage to persimmon and pear.

Mississippi. C. Lyle (October 24): The hickory twig girdler is reported by Inspector N. D. Peets, of Brookhaven, as causing slight damage to pecans in southwestern Mississippi. Twigs containing young larvae were found at State College on October 20. A wisteria twig cut off by this insect was received from Trebloc on October 1.

PECAN WEEVIL (Curculio caryae Horn)

Alabama. J. M. Robinson (October 28): Larvae were observed leaving pecans in central Alabama during the week beginning October 18.

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Mississippi. C. Lyle (October 24): A complaint of the hickory shuck worm was received from Meridian on October 6. Many infested pecans were found at State College on October 20. A heavy infestation is reported by Inspector G. L. Bond at Moss Point. Many of the nuts dropped before maturity, and many of those remaining on the tree have not filled out.

BLACK PECAN APHID (Melanocallis caryaefoliae Davis)

Mississippi. C. Lyle (October 24): The black pecan aphid is heavily infesting some orchards in the vicinity of Meridian, according to Inspector M. L. Grimes. Inspector J. E. Lee, Poplarville, reports it less abundant than in previous years.

CITRUS

CITRUS WHITEFLIES (Dialeurodes spp.)

Mississippi. C. Lyle and assistants (October 24): Whiteflies (D. citri Ashm.) are numerous on ornamental shrubbery in nearly all parts of the State.

Texas. S. W. Clark (October 14): All stages of D. citrifolii Morg. were present on Citrus at Mercedes, Hidalgo County, on September 16.

FLORIDA RED SCALE (Chrysomphalus aonidum L.)

Florida. H. Spencer (October 1): Infestation of citrus trees by the Florida red scale is heavier than at any time since the December freeze in 1934. Some small trees are being defoliated. On grapefruit now ripening the adult scales are quite conspicuous.

Texas. S. W. Clark (October 14): Many crawlers and young scales are present at Mercedes, Hidalgo County, on citrus.

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Texas. S. W. Clark (August 14): Infestations of California red scale, most located near McAllen and Mission, are rare and very spotted.

PURPLE SCALE (Lepidosaphes beckii Newm.)

Florida. H. Spencer (October 1): A season of frequent rains and high humidities during August and September has aided in natural control of purple scale by favoring the development of the red-headed fungus, which is very noticeable now. In some groves that have received heavy applications of Sulphur mixtures which left heavy residues on the leaves, purple scale infestations have increased this season.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Southeastern States. E. W. Berger and G. B. Merrill (October 23): Outbreaks of cottony-cushion scale continue in unusual numbers. This is indicated by the number of requests for Vedalia beetles. During October 31 colonies of 10 beetles each have been supplied to growers in Florida, some of the other Gulf States, North Carolina, and South Carolina. During the last fiscal year 270 colonies were supplied.

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

Texas. F. L. Thomas (October 14): Causing considerable injury to satsumas at Beaumont, in Jefferson County, also in Dimmit County, in the Winter Garden region, as reported by S. W. Clark and M. J. James.

CITRUS RUST MITES (Phyllocoptes oleivorus Ashm.)

Florida. H. Spencer (October 1): Citrus rust mites have been somewhat less numerous this year than in 1935. As is usual during August and September, infestation in unsprayed and undusted groves almost disappeared, but not until much russetting of fruit had occurred. In groves sprayed or dusted with sulphur there was more sun scald and spray burn of unshaded fruit than usual. Concerted efforts toward improvement of quality of fruit by control of pests and other means has noticeably increased the proportion of fruit that will make first grade.

A MITE (Anychus clarkii McG.)

Texas. S. W. Clark (August 10): Very few mites (A. clarkii) can be found on citrus at this time around Weslaco.

T R U C K - C R O P I N S E C T S

CORN EAR WORM (Heliothis obsoleta F.)

Maryland. G. Myers (October): Late sweet corn on my farm $2\frac{1}{2}$ miles east of Rockville is badly infested by the corn ear worm.

Florida. J. R. Watson (October 22): In Manatee County there was considerable damage on bell peppers.

F. S. Chamberlin (September): The corn ear worm has been causing considerable damage to string beans at Quincy.

Ohio. E. W. Mendenhall (October 15): Corn ear worm is quite bad and injurious to the late sweet corn in Ohio, rendering some ears unsalable.

T. H. Parks (October 24): Late sweet corn has been seriously infested. Moths of corn ear worm on the wing during October.

Indiana. J. J. Davis (October 16): Corn ear worm increased to conspicuous numbers in corn and tomatoes in the southern half of the State the latter half of September.

G. E. Gould (October 20): Corn ear worms have been exceedingly numerous around Lafayette, where damage to late sweet corn, tomatoes, green beans, and peppers was noted.

Tennessee. G. M. Bentley (October 15): The corn ear worm continues serious, especially on sweet corn in various parts of the State.

Mississippi. C. Lyle and assistants (October 24): Severe damage to fall tomatoes in Franklin County. Fall plantings of bunch beans in Jones County were heavily infested. This worm is less abundant on tomatoes than it was last month in Pearl River County.

Texas. J. N. Roney (September): H. obsoleta caused damage in Galveston, Wharton, and Collins Counties throughout September, attacking cotton and tomatoes.

Utah. G. F. Knowlton (September 29): Tomato fruitworm injury was moderate to light in Weber, Uintah, Iron, Cache, Box Elder, Davis, Utah, and Salt Lake Counties.

Washington. C. E. Woodworth (September 30): These caterpillars are destroying large numbers of zinnia blossoms at Walla Walla by burrowing in the flowers and flower stalks.

California. A. E. Michelbacher (October 19): Serious damage is being done to tomatoes by the corn ear worm in several localities in central California. A survey of Sacramento and Yolo Counties on September 27 and 28 showed the infestation in general to range from 2 to 8 percent. In a single field near Sacramento 24 percent of the fruit was infested, a small amount of the damage in this field being caused by the larvae of the sugar beet armyworm (Lophyane exigua Hbn.). In a number of the fields examined the infestation was apparently increasing. In the San Francisco Bay district infestations as high as 25 percent have been encountered in two fields. The infestation continues high and there are many plantings in which 10 percent or more of the fruit is damaged. In the Brentwood district the corn ear worm infestation has been rather small, although it is increasing rather rapidly. Many small worms are showing up and the infestation may exceed 10 percent in some fields.

SOUTHERN BEET WEBWORM (Pachyzancla bipunctalis F.)

South Carolina. C. O. Bare (October 15): Garden beets having the tops almost completely destroyed by the southern beet webworms were brought to the laboratory from a commercial planting at Charleston. Amaranthus weeds have also been entirely defoliated. This insect is more abundant than usual.

CUCUMBER BEETLES (Diabrotica spp.)

Missouri. L. Haseman (October 21): During the first half of the month the striped cucumber beetle (D. vittata) and the spotted cucumber beetle D. duodecimpunctata F.) were more abundant than I have seen them in many years, but during the latter half of the month they have been less abundant, presumably beginning to migrate to winter quarters.

Mississippi. J. E. Lee (October 24): D. vittata and D. duodecimpunctata were fairly abundant on fall cucumbers and less numerous on late beans in Lamar County.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Florida. J. R. Watson (October 22): The southern green stinkbug has been scarcer than we have ever known at this time of year. Parasitization by Trichopoda pennipes F. runs as high as 50 percent. This seems to hold for the entire peninsula.

Texas. F. L. Thomas (October 14): Fifty heads of hogari examined: 121 adults and nymphs; many mating; eggs present. Found on hogari at Cameron, Milam County, and on vegetables in Kilgore, Gregg County, October 7.

FALSE CHINCH BUG (Nysius ericae Schill.)

Georgia. T. L. Bissell (October 23): Leaves of turnip growing by the Flint River, near Alton, Meriwether County, are heavily injured by adults of a small bug believed to be N. ericae.

Mississippi. J. P. Kislanko (October 24): The false chinch bug is unusually abundant and causing serious injury to turnips in Stone, Forrest, and Jones Counties.

POTATO AND TOMATO

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Connecticut. N. Turner (October 17): Potato vine infestation in six towns of Hartford and Tolland Counties ranges from 5 to 95 percent. Fifty-three acres having from 70 to 100 percent infestation showed a reduction in yield. One grower estimated at least 1,800 bushels loss on 18 acres of Green Mountains. Both first- and second-generation infestation occurred. All these fields were in the heart of the newly developed potato-growing district in Connecticut.

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

California. A. E. Michelbacher (October 19): Three larvae of the tomato pinworm have been collected in the San Francisco Bay district. The first one was taken at San Jose, the second at Santa Clara, both in Santa Clara County, and the third at Hayward, Alameda County. (Two previous reports from this district in Insect Pest Survey files are from Marin County in 1931 and from Santa Cruz County in 1935.)

POTATO TUBER WORM (Gnorimoschema operculella Zell.)

Utah. G. F. Knowlton (October 10): Very little injury has been observed or reported in the section of Utah infested with the potato tuber worm.

California. A. E. Michelbacher (October 19): There is a light infestation of larvae in the tomato fields in the San Francisco Bay district. Generally, less than 1 percent of the tomatoes are infested.

TOMATO WORMS (Protoparce spp.)

Indiana. J. J. Davis (October 16): Tomato worms have been quite abundant in tomato fields in Indiana, attacking fruit and foliage.

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Tennessee. G. M. Bentley (October 6): There has been a surprisingly small number of Colorado potato beetles this year. In the 13 commercial potato-growing counties of the State very few have been found on the first and second crops.

CARROT BEETLE (Ligyrus gibbosus Deg.)

Oklahoma. C. G. Hatcher and C. F. Stiles (August 17): In tomato roots and feeding in tomato fruits at Cherokee.

WIREWORMS (Elateridae)

Connecticut. N. Turner (October 17): In a 3-ac Connecticut River Valley there was a loss of 200 bushels of potatoes (total yield 400), on account of wireworm damage of tubers. The pest was probably Linonius ectypus Say.

TOBACCO FLEA BEETLE (Epitrix parvula F.)

Texas. S. W. Clark (August 11): Damage by E. parvula reported in practically all tomato seed beds at Weslaco.

A LEAFHOPPER (Emboasca solana DeLong)

California. R. E. Campbell (October 24): This leafhopper was very abundant in several potato fields in Los Angeles and San Bernardino Counties. The plants had a generally unhealthy appearance and growth was not what it should have been, but it was impossible to determine whether the leafhoppers were the sole cause of the injury. (Det. P. W. Oman.)

POTATO LEAFHOPPER (Emboasca fabae Harr.)

Tennessee. G. M. Bentley (October 23): Potato leafhopper, one of our outstanding potato pests, has been very prevalent on both plantings of the Irish potato crop.

Texas. J. N. Roney (September 15): E. fabae causing severe injury to lima beans and black-eyed peas in Galveston County.

TOMATO PSYLLID (Paratrioza cockerelli Sulc.)

Utah. G. F. Knowlton (September 29): Potato psyllid injury was reported from Sevier, Wasatch, Piute, Garfield, Tooele, Washington, Kane, Weber, and Uintah Counties. Damage this year was much less extensive than in 1935.

BEANS

BEAN LEAF ROLLER (Goniurus proteus L.)

Florida. F. S. Chamberlin (September): The bean leaf roller is causing some damage to string beans at Quincy.

BEAN THRIPS (Heliothrips fasciatus Perg.)

Utah. G. F. Knowlton (September): Injury to bean foliage by thrips was reported from Iron, Weber, and Uintah Counties.

CABBAGE

IMPORTED CABBAGE WORM (Ascia rapae L.)

Virginia. H. G. Walker (October 26): The imported cabbage worm is relatively scarce in the Norfolk district.

Indiana. G. E. Gould (October 20): Cabbage worms have been unusually destructive this fall and are still feeding on the late cabbage crop.

Tennessee. G. M. Bentley (October 21): Comparatively few imported cabbage worms have been present on cabbage, brussels sprouts, and cauliflower.

Missouri. L. Haseman (October 21): The imported cabbage butterfly has been quite abundant, ovipositing on late cabbage, turnips, and related crops. Late cabbage has been severely attacked throughout central Missouri.

Utah. G. F. Knowlton (October 12): Cabbage worms seriously damaged cabbage and cauliflower in various parts of Tooele County. (September 29): Cabbage worm injury has been reported from Garfield, Wasatch, Grand, Beaver, Sevier, Morgan, Weber, Millard, Cache, Uintah, Iron, Salt Lake, and Piute Counties.

SOUTHERN CABBAGE WORM (Ascia protodice B. & L.)

Georgia. T. L. Bissell (October 10): Caterpillars are destructive to turnip and collard at Experiment and Clarkston.

Kentucky. W. A. Price (October 24): Southern cabbage worms are abundant at Lexington.

Missouri. L. Haseman (October 21): The native cabbage butterfly has been quite abundant, ovipositing on late cabbage, turnips, and related crops. Late cabbage has been severely attacked throughout central Missouri.

Mississippi. C. Lyle (October 24): The southern cabbage worm was damaging turnips at Starkville on October 15.

CABBAGE LOOPER (Autographa brassicae Riley)

New York. M. D. Leonard (October 15): The cabbage looper has been abundant and destructive on the large commercial crop of cauliflower on Long Island. It was apparently much more abundant than the imported cabbage worm but, with a change to cooler weather about the first of October, the infestation has eased off and apparently control measures are, in general, no longer necessary.

Virginia. H. G. Walker (October 26): A disease has been keeping cabbage loopers in check at Norfolk, therefore damage to collards, kale, and cabbage has been very light.

Florida. J. R. Watson (October 22): The cabbage looper was extremely abundant

in the Bradenton section of Manatee County.

Indiana. G. E. Gould (October 20): Cabbage loopers were destructive in August and early in September but were checked later by bacterial disease.

Missouri. L. Haseman (October 21): Cabbage loopers have been abundant, associated with common cabbage worms on cabbage and related crops during the month.

Mississippi. C. Lyle (October 24): The cabbage looper was causing severe damage to rutabagas on September 24 at Florence.

DIAMONDBACK MOTH (Plutella maculipennis Curt.)

Tennessee. G. M. Bentley (October 23): Three years ago the diamondback moth was very abundant in our commercial cabbage-growing sections of western Tennessee, being brought in primarily on plants purchased out of the State. During the last 2 years the growers would not accept plants with the diamondback moth and, as a result, there has been no apparent injury from it this year.

Virginia. H. G. Walker (October 26): The larvae have been very destructive to many kale and collard fields during the past month.

CABBAGE APHID (Brevicoryne brassicae L.)

Virginia. H. G. Walker (October 26): The cabbage aphid is rather scarce at Norfolk but is increasing and may cause some damage under favorable weather conditions.

Utah. G. F. Knowlton (October 12): Cabbage aphids were abundant and damaging to cabbage in various parts of Tooele County.

HARLEQUIN BUG (Murgantia histrionica Hahn)

South Carolina. F. Sherman and associates (October 20): Considerable complaint of harlequin bug from the eastern section. J. G. Watts reports finding this bug abundant on shepherds-purse weed.

Tennessee. G. M. Bentley (October 23): Only a few complaints of the harlequin bug have been reported.

Mississippi. C. Lyle (October 24): The harlequin cabbage bug is present in many gardens throughout the State, especially on fall collards and mustard.

MELONS

MELON APHID (Aphis gossypii Glov.)

Indiana. J. J. Davis (October 16): Melon aphid reported very abundant in northern Indiana the last of August.

Missouri. L. Haseman (October 21): During the month there has been a progressively increasing invasion of melon aphid on cucumbers, squash, and pumpkins throughout central Missouri, with a decrease in numbers of ladybeetles, lace-wings, and hymenopterous parasites attacking it.

SQUASH

SQUASH BUG (*Anasa tristis* Deg.)

Missouri. L. Haseman (October 21): During the month the squash bug has been on the increase and most of them are now transforming to the adult stage, preparatory to seeking winter quarters.

Kansas. H. R. Bryson (October 24): On account of the dry weather during the latter part of the summer, the injury to squashes and pumpkins by the squash bug was quite marked.

TURNIP

TURNIP APHID (*Rhopalosiphum pseudobrassicae* Davis)

Virginia. H. G. Walker (October 26): The turnip aphid has been very abundant in cabbage seed beds this fall at Norfolk.

Indiana. J. J. Davis (October 16): Turnip aphids were abundant and destructive to turnips in the eastern part of the State during September.

Kentucky. W. A. Price (October 24): Turnip aphids have been reported in destructive numbers from Waynesburg and Louisville.

SPINACH

GREEN PEACH APHID (*Myzus persicae* Sulz.)

Virginia. H. G. Walker (October 26): The spinach aphid is from scarce to moderately abundant on kale and collards but very scarce on spinach at Norfolk.

BEET LEAFHOPPER (*Eutettix tenellus* Bak.)

Texas. M. J. James (October 19): The first specimen of beet leafhopper this fall was taken on a screen trap on October 12. Last winter and early in the spring this insect and the virus disease it transmits caused severe injury to spinach in the Winter Garden district of Texas.

STRAWBERRY

STRAWBERRY LEAF ROLLER (*Ancylis comptana* Froel.)

Ohio. E. W. Mendenhall (October 16): Leaf rollers were quite bad in some strawberry plantations at Miami, in Clark County, but where continued spraying or dusting was carried on the rollers were kept down to minimum.

Utah. G. F. Knowlton (September 29): Strawberry leaf roller injury is reported from Wasatch, Juab, and Uintah Counties.

STRAWBERRY ROOT APHID (Aphis forbesi Weed)

Tennessee. G. M. Bentley (October 23): There has been a very heavy infestation of the strawberry root louse on the roots and leaf petioles of strawberry plants in some fields.

SWEETPOTATO

SWEETPOTATO WEEVIL (Cylas formicarius F.)

Texas. J. N. Roney (September): Weevils abundant during September in Galveston County.

TOBACCO

TOBACCO WORMS (Protoparce spp.)

Tennessee. G. M. Bentley (October 23): P. sexta Johan and P. quinquemaculata Haw. have been very prevalent in all the tobacco-growing counties of this State. The two species occur in about equal numbers.

Florida. F. S. Chamberlin (September): Tobacco hornworms (P. sexta) are very scarce at Quincy.

TOBACCO FLEA BEETLE (Epitrix parvula F.)

Florida. F. S. Chamberlin (September): Tobacco flea beetles appear to be going into winter quarters at Quincy.

C O T T O N I N S E C T S

PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. R. E. McDonald (October 19): The most important news of the week was the finding of the pink bollworm in the Western Extension of Texas. On October 13 two larvae were found in gin trash at Midland, Midland County, and two more on October 15. The last specimens previously found in Midland County were in the 1934 crop. On October 14 two specimens were found in trash from a local gin at Big Spring, in Howard County, and on the following day another specimen was found. Howard County was previously in the regulated area, the last infestation being in the 1927 crop.

A. J. Chapman (October 3): At Presidio boll-infestation counts were made in 15 fields during the week and the average infestation was 97.73 percent, with an average of 3.8 bolls per plant. The average infestation in eight of these fields last year was 97 percent, or an average of 5.2 bolls per plant, as compared to 98.75 percent with an average of 3.3 bolls per plant, this year. (October 24): Practically all fields in

the valley are now infested 100 percent.

Mexico. C. S. Rude (October 20): At Tlahualilo the infestation remains high, the number of worms per boll being more because of the relatively small number of green bolls.

COTTON LEAF WORM (Alabama argillacea Hbn.)

Canada. Canadian Insect Pest Review (September 30): Several specimens of the cotton leaf worm have been taken recently in light traps at Queenston, Ontario. (See vol. 14, no. 4, p. 130.)

Maine. H. F. Pairson (October): Cotton leaf worm has appeared in several flights at lights from September 9 to 23 at Bar Harbor. Reported by A. E. Brower.

Virginia. C. R. Willey (October 13): Flight of moths in Norfolk the night of October 8. Hundreds of moths on buildings and especially on large show windows.

Ohio. T. H. Parks (October 24): Moths were common at lights about Columbus during October.

J. S. Houser (October 9): The evening of October 7 a considerable number of moths invaded the downtown area of Wooster, attracted by the street lights. Next day they came in increased numbers and during the 9th the upper parts of the lamp posts were completely covered, also parts of store and restaurant windows. Have never before seen such an extensive flight. Certainly several hundred thousand moths were clustered today in the downtown area.

H. Bennett (October 9): There are millions throughout the city of Akron. (Det. by J. F. G. Clark.)

Indiana. J. J. Davis (October 16): This moth has been reported as abundant in several parts of Indiana. At Wabash on September 8, the moths were injuring grapes. Early in September some cotton plants growing in the experimental garden at Lafayette were defoliated by caterpillars, eggs having evidently been laid by the migrating moths the last of August.

E. V. Walter and associates (October 8): Large numbers of adults suddenly appeared around lights at Lafayette today.

Illinois. W. P. Flint (October 19): Heavy flights of moths in central and north-central Illinois during the past 2 weeks.

BOLL WEEVIL (Anthonomus grandis Boh.)

Georgia. P. M. Gilmer (October 17): In southern Georgia the boll weevil is present in all fields yet unplowed, but the concentration is low and the number that will enter hibernation is less than in previous years, as cotton has been so defoliated by the cotton leaf worm that there are

neither leaves nor squares for feeding and breeding.

Mississippi. H. C. Young (October 17): In Oktibbeha County the population is about the same as last season, which was below normal, and the number to enter hibernation will be very small. Extremely dry weather during September and October, together with the leaf worm, has prevented the building up of a large weevil population.

Louisiana. R. C. Gaines (October 24): Reporting on boll weevils taken on nine flight screens at Tallulah, in comparison with the 2 previous years on the same dates shows the following variations:

Date	: 1934 :	1935 :	1936
	: Number:	Number :	Number
October 3.....	18 :	19 :	86
October 10.....	41 :	24 :	24
October 17.....	31 :	40 :	6
October 23.....	98 :	34 :	7

Adult weevils cannot be found in great numbers in this locality and, as there is practically no feeding material, it is apparent that there will be a small number of weevils to enter hibernation.

Texas. R. W. Moreland (October 17): In Brazos and Burleson Counties, in collecting weevils for first installation of hibernation cages, it was difficult to locate a cotton field that had not been stripped by leaf worms.

K. P. Ewing (October 17): In Calhoun County the boll weevils are continuing to breed in the late-squaring cotton, but favorable conditions for hibernation are being lessened by leaf worms stripping the cotton.

Mexico. C. S. Rude (October 20): The boll weevil is very abundant over the whole Laguna. In most places the top crop is almost a total loss.

THURBERIA WEEVIL (Anthonomus grandis thurberiae Pierce)

Arizona. W. A. Stevenson (October 17): In Pima County in making the annual fall examinations for insect damage to cotton bolls, a 0.2-percent infestation of Thurberia weevils was found in one field about 6 miles south of Tucson.

A BEETLE (Colaspis sp.)

Arizona. T. P. Cassidy (October 24): A small field of cotton that had apparently been ragged by Colaspis sp. was found about 5 miles south of Tucson on October 23. During the past two seasons injury that approached a commercial damaging point has been noted from Colaspis sp. in two areas in the Tucson farming district.

COTTON APHIDS (*Aphididae*)

South Carolina. F. F. Bondy and C. F. Rainwater (September 30): Aphis gossypii Glov. has been present throughout the season but a severe infestation did not develop. (October 10): A few aphids are still found on the young tender growth of cotton at Florence.

Georgia. P. M. Gilmer (October 17): In southern Georgia cotton aphids are present in small numbers in a few fields.

Mississippi. E. W. Dunnam (October 17): Cotton aphids never developed to a noticeable extent in any fields in the vicinity of Stoneville, not a single complaint having been received.

Arizona. T. P. Cassidy (September 30): Cotton aphid infestation increased rapidly during the past week throughout the Tucson and Salt River Valley farming areas.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

South Carolina. F. F. Bondy (October 10): The cotton flea hopper has decreased in numbers and very few are now found in cotton at Florence.

Georgia. P. M. Gilmer (October 10): There are a few flea hoppers present in cotton in southern Georgia.

Mississippi. E. W. Dunnam (October 17): At Stoneville no flea hoppers have been noted in cotton.

H. C. Young (October 3): In Oktibbeha County croton plants have made good growth during August and September. Flea hoppers have been fairly abundant and the prospects are for a much larger crop of flea hoppers next spring than during the past 3 years.

Texas. K. P. Ewing (October 24): The principal flea hopper activity noted this week was the catching of a few hoppers on the flight screens in Calhoun County, which shows that there is still some activity in the fields.

Mexico. C. S. Rude (October 20): No flea hoppers were observed at Tlahualilo.

COMMON RED SPIDER (Tetranychus telarius L.)

South Carolina. F. F. Bondy (July): Local sporadic infestations of red spider occurred in Florence, Darlington, and Marlboro Counties. In two of these counties (Florence and Marlboro) the infestation was traced from pokeweed and curly dock, respectively.

F O R E S T A N D S H A D E - T R E E I N S E C T S

BUCK MOTH (Hemileuca maia Drury)

Wisconsin. E. L. Chambers (October 23): Serious defoliation to oak, poplar, and birch occurred in several northern counties late in August and moths appeared in large numbers during the latter part of September.

HEMLOCK SPANWORM (Ellopiia fiscellaria Guen.)

Maine. H. B. Peirson (October): Larvae of hemlock looper found on fir and spruce this summer on Mount Desert Island. A heavy flight was on in September. This insect seems to be rapidly increasing.

ALDER

A SAWFLY (Hemichroa americana Prov.)

Connecticut. E. A. Back (September 4): I collected adults of this sawfly on this date in and about an alder swamp near Middletown. The alders had been defoliated earlier in the season and were still bare at the time the adults were found emerging from the soil in large numbers. Cast larval skins were found attached to leaf petioles and twigs.

BEECH

A LEAF TIER (Psilocorsis faginella Chamb.)

Maryland. J. A. Hyslop (October 11): This gelechid ties two leaves together and between them feeds by eating off the epidermis bleaching the leaves. It has been working all summer and now has damaged from 20 to 50 percent of the leaves on every tree in my woodlot of about 50 acres at Avondale.

WOOLLY BEECH APHID (Phylloxera fagi L.)

Connecticut. E. P. Felt (October 22): The beech leaf aphid has been somewhat abundant and injurious to beech trees at Middletown.

BEECH SCALE (Cryptococcus fagi Bacr.)

Maine. H. B. Peirson (October): A new small, but very heavy, infestation of felted beech scale was found on beech on Mount Desert Island on September 9.

ELM

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus Marsh.)

West Virginia. M. W. Blackman (October): S. multistriatus was recently found in Parkersburg. By the end of September this pest was found over an area approximately 100 miles in diameter involving parts of both West Virginia and Ohio. It had not previously been known from either of these States.

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Washington. M. H. Hatch (September 28): A single specimen of elm leaf beetle was taken on this date at Seattle, in King County.

HEMLOCK

HEMLOCK BORER (Melanophila fulvoguttata Harr.)

Pennsylvania. E. P. Felt (October 22): The spotted hemlock borer was abundant under the bark of hemlock trees in the Philadelphia district, presumably limiting its attack to weakened trees.

MAPLE

MAPLE BORER (Synanthedon aceris Clem.)

Ohio. E. W. Mendenhall (October 15): The maple borer is found on soft maple in street planting in Baltimore.

MAPLE LEAF CUTTER (Paraclesonisia acerifoliella Fitch)

Massachusetts. E. P. Felt (October 22): The maple leaf cutter is locally abundant in the Pittsfield district.

PINE

ABBOT'S SAWFLY (Neodiprion abbotii Leach)

Ohio. T. H. Parks (October 24): Larvae of Abbot's pine sawfly were received from Hocking County, with the statement that they were injurious on young pines.

A WEEVIL (Hylobius radicis Buchanan)

New York. E. P. Felt (October 22): A pine root weevil, H. radicis, the work of which has been noted earlier as H. pales Hbst., is responsible for several reports of injury from Long Island.

WHITE PINE APHID (Cinara strobi Fitch)

New York. E. P. Felt (October 22): Full-grown adults and eggs are numerous on white pine at White Plains.

A PYRALID (Tetralopha robustella Zell.)

Ohio. T. H. Parks (October 24): Larvae were received from Hocking County with the statement that they were injurious on young red pines.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Connecticut. M. P. Zappe (October 23): Scales very abundant in nurseries and

private plantings in various parts of Connecticut. Last year 42 nurseries were infested; this year, 72.

Nebraska. M. H. Svonk (October 15): An inquiry concerning the control of the pine-leaf scale was received on September 23 from Washington County.

PLANETREE

SYCAMORE LACEBUG (Corythucha ciliata Say)

Florida. J. R. Watson (October 22): The sycamore lacebug has browsed up sycamore trees as usual.

SPRUCE

EASTERN SPRUCE BEETLE (Dendroctonus piceaperda Hopk.)

Maine. H. B. Peirson (October): A single spruce tree heavily infested by eastern spruce beetle was found at the entrance to the National Park at Bar Harbor on September 23.

Vermont. J. V. Schaffner, Jr. (October 26): Recent information concerning the infestation in the Green Mountain National Forest on the Falls Brook Watershed, locally known as "Birch", in Rochester indicates that the dead and dying spruce covers an area of between 800 and 900 acres.

EUROPEAN SPRUCE SAWFLY (Diprion polytorus Htg.)

Connecticut. J. V. Schaffner, Jr. (October 26): On October 20 H. J. McAloney observed second- to sixth-instar larvae of the European spruce sawfly in a plantation of Norway and white spruce at Orange.

TUNG-OIL TREE

A BAGWORM (Psyche nigrata B. & McD.)

Florida. H. Spencer (October 1): Small bagworms have been taken several times during the summer on the leaves of the tung-oil tree in central Florida. (Det. by C. Heinrich.)

I N S E C T S A F F E C T I N G G R E E N H O U S E

A N D O R N A M E N T A L P L A N T S

HAIRY CHINCH BUG (Blissus hirtus Montd.)

Ohio. J. S. Houser (September 25): At Gates Mills, Cuyahoga County, a 2-acre lawn, which has received exceptional care, was seriously damaged by chinch bugs late in the summer, some portions being killed outright. Full-grown and very young insects are now present.

A SCARABAEID (Ochrosidia villosa Burm.)

Connecticut. W. E. Britton (October 22): Two lots of grubs received from Greenwich, having caused moderate injury in lawns.

New York. E. P. Felt (October 22): Grubs of O. villosa were found in large numbers in an exceptionally fine lawn area at Rye.

ASIATIC BEETLE (Anomala orientalis Wtrh.)

Connecticut. W. E. Britton (October 22): Many untreated lawns damaged in New Haven and West Haven. Recently grubs were received from Norwalk.

GREEN JUNE BEETLE (Cotinis nitida L.)

Indiana. J. J. Davis (October 16): Green June beetle larvae reported damaging lawns in several southern Indiana localities, especially at Evansville, where, according to a report received August 25, the parasite Scolia dubia Say was also abundant.

A MIDGE (Sciara inconstans Fitch)

Nebraska. M. H. Swenk (October 15): The fickle midge was reported infesting house plants in Lancaster County on October 6.

GARDEN FLEA HOPPER (Halticus citri Ashm.)

New Jersey. M. D. Leonard (October 15): On October 12 I observed at Ridgewood a rather large bed of ageratum, the leaves of which showed considerable effects of feeding punctures of the garden flea hopper. The insects were fairly numerous on the plants.

WHITE PEACH SCALE (Aulacaspis pentagona Targ.)

District of Columbia. Mrs. F. McManamy (October 2): Specimens of scale insects on ornamental peach were collected in Washington, D. C. (Det. by H. Morrison.)

Virginia. G. T. French (October 9): The white peach scale is increasing materially in the vicinity of Richmond on privet hedges, and unquestionably is doing considerable damage.

South Carolina. G. W. Brown (September 18): Insect on mulberry foliage submitted from Roebuck, Spartanburg County, has been identified as A. pentagona.

Florida. G. B. Merrill (October 23): There appears to have been considerable hatching of white peach scale eggs during the last several weeks.

A SCALE INSECT (Pseudocnidea paeoniae Coll.)

Louisiana. E. Upton (September 9): A scale-infested azalea twig was taken in New Orleans. (Det. by H. Morrison.)

BOXWOOD

BOXWOOD LEAF MINER (Monarthropalpus buxi Laboulb.)

Maryland. E. N. Cory (October 5): Boxwood leaf midge reported infesting boxwood at Forest Glen.

CAMELLIA

TEA SCALE (Fiorinia theae Green)

North Carolina. M. Hutaff (September 16): Scale insect on japonica leaves at Wilmington. (Det. by H. Morrison.)

Mississippi. C. Lyle (October 24): This scale insect was attacking Camellia japonica at Leakesville and Ocean Springs the latter part of September.

CHINABERRY

A COREID (Jadera haematoloma H. S.)

Oklahoma. F. A. Fenton (October 22): We have received further reports of J. haematoloma on Chinaberry trees.

CHRYSANTHEMUMS

THRIPS (Thysanoptera)

Maryland. E. N. Cory (October 3): Thrips reported on chrysanthemums at Baltimore.

Ohio. E. W. Mendenhall (October 16): Heliethrips haemorrhoidalis Bouche is abundant on chrysanthemums in greenhouses in Springfield.

CITRUS MEALYBUG (Pseudococcus citri Risso)

Ohio. E. W. Mendenhall (October 18): The mealy bug is abundant on chrysanthemums in a greenhouse in Piqua, Miami County.

DAHLIA

A CERAMBYCID (Hippopsis lemniscata F.)

Louisiana. H. L. Dozier (September 30): Larvae were tunnelling the stalks of dahlia at New Orleans. A serious outbreak over the city during the last few weeks, killing hundreds of large plants.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Connecticut. N. Turner (October 17): Leafhoppers continued to make heavy attacks on dahlia until frost. Many varieties were so stunted that they did not blossom.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

New Jersey. E. P. Felt (October 22): Euonymus scale was reported as injuriously abundant on Pachysandra at Orange.

Mississippi. Jack Milton (October 24): C. euonymi is very abundant at Magee.

GLADIOLUS

BLACK BLISTER BEETLE (Epicauta pennsylvanica Deg.)

Ohio. E. W. Mendenhall (October 1): Blister beetles were abundant on gladiolus and caused some damage to the flowers in gardens in Clark County.

HAWTHORN

QUINCE CURCULIO (Conotrachelus crataegi Walsh)

Georgia. O. I. Snapp (October 17): This insect was unusually abundant on haw trees at Fort Valley.

IVY

OLEANDER SCALE (Aspidiotus hederac Vall.)

Ohio. E. W. Mendenhall (October 1): Ivy or oleander scale abundant on ivy plants in greenhouse in Dayton.

LILIES

BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Nebraska. M. H. Swenk (October 15): From Clay County on September 30 came the report of a light infestation of lily bulbs.

MAGNOLIA

MAGNOLIA SCALE (Neolecanium cornuparvum Thro)

Connecticut. E. P. Felt (October 22): The magnolia scale was exceedingly abundant and quite injurious on a magnificent tree at Middletown.

ROSE

ROSE MIDGE (Dasyneura rhodophana Coq.)

New York. E. P. Felt (October 22): The rose midge injured many tips of

outdoor roses at Roslyn, Long Island.

RED-NECKED CANE BORER (Agrilus ruficollis F.)

Ohio. E. W. Hindsbhall (October 9): Red-necked cane borer is abundant in the Rosa rugosa stock in a nursery at Potosi, Mo.

STRAWFLOWERS

BEAN APHID (Aphis rumicis L.)

New Jersey. H. D. Leonard (October 15): Strawflowers (Helichrysum sp.) were considerably infested at Ridgewood on October 12.

VERMIN

TWO-MARKED TREEHOPPER (Arachnura bipectata Say)

New York. R. E. Hensley (October 12): White egg masses of two-marked tree hoppers were found in numbers on the branches of several blackhaws (Viburnum acerifolium) in a large ornamental planting at Rochester. Immaturely (V. lentago) nearby was infested to a lesser extent.

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicidae)

Georgia. J. B. Hull (September 30): Residents of the island near Savannah state that there were fewer mosquitoes (Aedes spp.) this summer than ever before. More of these pests were found, however, during September than in the 2 preceding months.

Florida. J. R. Watson (October 22): In the northern part of the State September was very dry, therefore mosquitoes are much less abundant than in most years.

Tennessee. G. M. Bentley (October 25): During September and October there has been considerable annoyance from A. aegypti L. in the eastern part of the State.

Missouri. L. Haseman (October 21): During the month several species of native mosquitoes have been abundant and annoying on warm evenings.

Kansas. H. R. Bryson (October 24): Mosquitoes were present again about the first week in October, after an almost complete absence during the summer.

Utah. G. F. Knowlton (September 29): Mosquitoes have annoyed man and livestock in many parts of Utah.

Oregon. H. H. Stace (September 30): The population of A. aldrichi Dyar and Knab and A. vexans Meig. in the lower Columbia River Valley fall off rapidly beginning July 17, when high temperatures and low humidity become consistent. A most unusual number of A. aldrichi were, however, observed in a favorite breeding area near Portland on September 23. Seventy-one females were collected in a 10-minute sample. This number compares favorably with similar samples taken at the height of the breeding season. The specimens taken were biting viciously. Rarely have we observed more than an occasional individual after September 1.

FLEAS (Otenocerhalides sp.)

United States. E. C. Cushing (October 26): Numerous letters from all parts of the country, asking for information on methods of controlling infestations of dog and cat flea (C. canis Curt. and C. felis Bouche) indicate that these pests have been more troublesome this season than for several years past in houses.

Indiana. J. J. Davis (October 16): Fleas were frequently reported during August as very abundant and annoying in houses and farm buildings.

Nebraska. M. H. Swenk (October 15): On September 24 a Lancaster County correspondent reported the cat flea (C. felis) infesting a basement. From Richardson and Dodge Counties on October 7 and 8, respectively, complaints were received of the infestation of a basement and farm buildings by the dog flea (C. canis).

PUSS CATERPILLAR (Megalopyge opercularis S. & A.)

Alabama. J. M. Robinson (October 28): A flannel moth was received on October 9 from Frisco City, with a letter stating that a boy had been affected by the poison from the bristles. This proved to be M. opercularis. A pupa came in today from Headland. It seriously affected the hand of a woman who attempted to brush the larva off.

Louisiana. T. E. Snyder (October 19): During the past few weeks the puss caterpillar has been attracting considerable interest in the vicinity of New Orleans. We have had four or five samples turned in to the office which were either feeding on rose bushes or choke cherry (cultivated). The caterpillars have been brought to the office, not on account of the fact that they were defoliating plants, but because they caused nettle rash. In an old last year's cocoon I obtained quite a few adult flies this year. (Det. by D. G. Hall as Winthemia sp.)

BLACK WIDOW SPIDER (Latrodectus mactans F.)

Alabama. J. M. Robinson (October 28): On September 25 a black widow spider was received in this office. It was reported by a doctor at Dadeville as having bitten a person, resulting in serious injury.

Washington. R. S. Lehman (October 26): A heavy infestation of black widow spiders was investigated in an outdoor dirt cellar at College Place. The owner also reported seeing the spiders in the house and in loose places around the doors.

SAND FLIES (Culicoides sp.)

Florida. J. B. Hull (September 30): During July all reports from the lower east coast of Florida stated that sand flies were worse than the oldest residents could remember. More correspondence in regard to sand fly annoyance and requests for aid were received that month than ever before.

Georgia. J. B. Hull (September 30): During September, especially the third week of the month, C. canithorax Hoffm. began emerging from the grass marshes near Savannah and caused considerable annoyance for a few nights when the weather was cool.

CATTLE

SCREWORM (Cochliomyia americana C. & P.)

United States. W. E. Dove (October 26): During the past month sporadic reports, comparable to cases occurring in October 1935, were received from different counties. The low atmospheric temperatures caused farmers to castrate and earmark animals just before turning them into bean and peanut fields for fattening. When such injuries were not properly treated with a repellent they became favorable sites for screwworm infestations. For the period September 25 to October 23 the following reports of screwworms and maggot cases were received: Alabama, none; Arizona, 352; California, 158; Florida, 5,506; Georgia, 805; Louisiana, 5 cases in stockyards; Mississippi, 1 human case; New Mexico, 4,185; Oklahoma, 166; South Carolina, 10; and Texas (57 to approximately 75 counties), 15,009.

HORN FLY (Haematobia irritans L.)

Missouri. L. Haseman (October 21): Notwithstanding the cool weather, the horn fly has continued to be rather abundant throughout central Missouri and extremely annoying to livestock on warm days.

Texas. H. E. Parish (October 19): Horn flies are very numerous around Monard and cause many cases of screwworms around the horns of bucks, mutton sheep, and horned ewes.

STABLEFLY (Stomoxys calcitrans L.)

South Carolina. F. Sherman and associates (October 20): Stable flies severe near the coast late in the summer.

Missouri. L. Haseman (October 21): Notwithstanding the cool weather, the stable fly has continued to be rather abundant throughout central Missouri and extremely annoying to livestock on warm days.

HORSE

BOTFLIES (Gastrophilus spp.)

Texas. D. C. Porman (October 5): Horse bots have been notably scarce this year. The first eggs or first observations were noted about September 17. During the next few days about one-half dozen adult flies were observed and a few eggs were deposited.

O. G. Babcock (October 15): Stomach botflies (G. intestinalis) have been depositing eggs at Menard for some time and are still doing so. Eggs on horses are fairly common.

Utah. G. F. Knowlton (September 29): Botflies have annoyed livestock in Garfield, Morgan, Junb, Millard, Wasatch, Rich, Tooele, and Salt Lake Counties.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

GRANARY WEEVIL (Sitophilus granaria L.)

New York. E. A. Back (October): S. granaria was received late in September from Jamaica.

New Jersey. E. A. Back (October): Specimens were received from Jersey City the latter part of September.

Pennsylvania. E. A. Back (September 27): On this date specimens were forwarded from Sinking Springs, where thousands of them were reported to be swarming throughout a house. It was claimed that they crawled to the house from a flour and grist mill located on adjoining property.

RICE WEEVIL (Sitophilus oryzae L.)

Mississippi. J. E. Lee (October 24): The corn at the South Mississippi Experiment Station at Poplarville had been damaged 20 percent by weevils before harvest.

VARIED CARPET BEETLE (Anthrenus verbasci L.)

General. E. A. Back (October 1): Specimens of carpet beetle in larval form have been received from the following places: Woodlawn, N. Y.; Pittsburgh, Pa.; Baltimore and Braddock Heights, Md.; Detroit, Mich.; and Seattle, Wash. In Seattle the infestation was so heavy that the entire house was fumigated. Numerous living larvae were found after the fumigation.

CARPET BEETLE (Anthrenus scrophulariae L.)

Indiana. G. E. Gould (October 20): Reports have been received from various parts of the State concerning occurrence of the buffalo carpet beetle

larvae and damage by it.

HIDE BEETLE (Dermestes vulrinus F.)

Michigan. E. A. Back (September): Larvae and adults were received from a house in Detroit the second week of September. Specimens could not be traced to a source of food supply.

A DERMESTID (Thylocladius contractus Mots.)

Illinois. E. A. Back (October): This dermestid was received September 2 from a home in Chicago where they were crawling over clean clothing and becoming trapped in dishes. The species was also received in the larval form late in September from an apartment house in Chicago where it was so troublesome that control measures were turned over to a firm of exterminators.

BLACK FUNGUS BEETLE (Alphitobius piceus Oliv.)

California. E. A. Back (October): The black fungus beetle, a common pest of farinaceous materials, was collected in September in southern California in a mausoleum, where the adults were found in large clusters along the cracks surrounding the stones sealing the individual vaults.

A TENEBRIONID (Alobates pennsylvanica Deg.)

New York. E. A. Back (September 18): Specimens were received on September 18 from a house in Orchard Park.

CIGARETTE BEETLE (Lasioderma serricorne F.)

District of Columbia. E. A. Back (October 8): The cigarette beetle was found in Washington emerging on October 8 from furniture containing 65 percent flax tow. Furniture was purchased new in September 1935. The beetle was found in October emerging in numbers in Washington, D. C., from upholstered furniture just unpacked from Istanbul, Turkey.

Nebraska. M. H. Swenk (October 15): A specimen of the cigarette beetle was sent in by a Douglas County correspondent on October 5, with the statement that it was proving troublesome in a house in that county.

CORN SAP BEETLE (Carpophilus dimidiatus F.)

Mississippi. C. Lyle (October 24): On September 26 the corn sap beetle was found at Houston in considerable numbers on cotton seed that had been cracked.

POWDER POST BEETLES (Lyctus spp.)

Florida. J. R. Watson (October 22): A great deal of damage was done to lawn furniture, mostly of cypress wood, by the powder post beetle.

Indiana. J. J. Davis (October 16): Powder post beetles have been destructive to timbers in many sections of the State.

A GRAIN BEETLE (Cephus constrictus Gyll.)

North Dakota. J. A. Munro (October 27): C. constrictus was moderately abundant in a bin of grain at Fargo. (Det. by W. S. Fisher)

HOUSE CRICKET (Gryllus domesticus L.)

Virginia. E. A. Back (October): On July 3 a specimen was received from Dare with the statement that clothing was being damaged.

Ohio. E. A. Back (October): On October 3, G. domesticus was received from Dayton, with the statement that the insects are bothersome in a house located near a city dump.

Utah. G. F. Knowlton (September 29): Crickets were annoying in houses at Richfield.

NORTHERN MOLE CRICKET (Gryllotalia hexadactyla Parry)

Maine. E. A. Back (October 15): Specimens of this mole cricket were received on October 15 from a silk-storage room of a manufacturing plant in Bangor.

INDIAN-LEAF MOTH (Plodia interpunctella Hbn.)

North Dakota. F. Gray Butcher (October 27): P. interpunctella infesting corn in storage at Fargo.

SILVERFISH (Lerisma saccharina L.)

Tennessee. G. M. Bentley (October 23): The silverfish is prevalent in many houses in the State. It is reported to be eating fabrics, as well as paper.

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